Disinfectants

(1) Saniton

tablets

Active Principle:

Sodium dichloro iso Cyanurate

uses Sanitation, disinfection of poultry farms, slaughter houses, livestock

Contraindications shouldn't be used before or after live vaccination by 24 hours

(2) Copper Sulphate

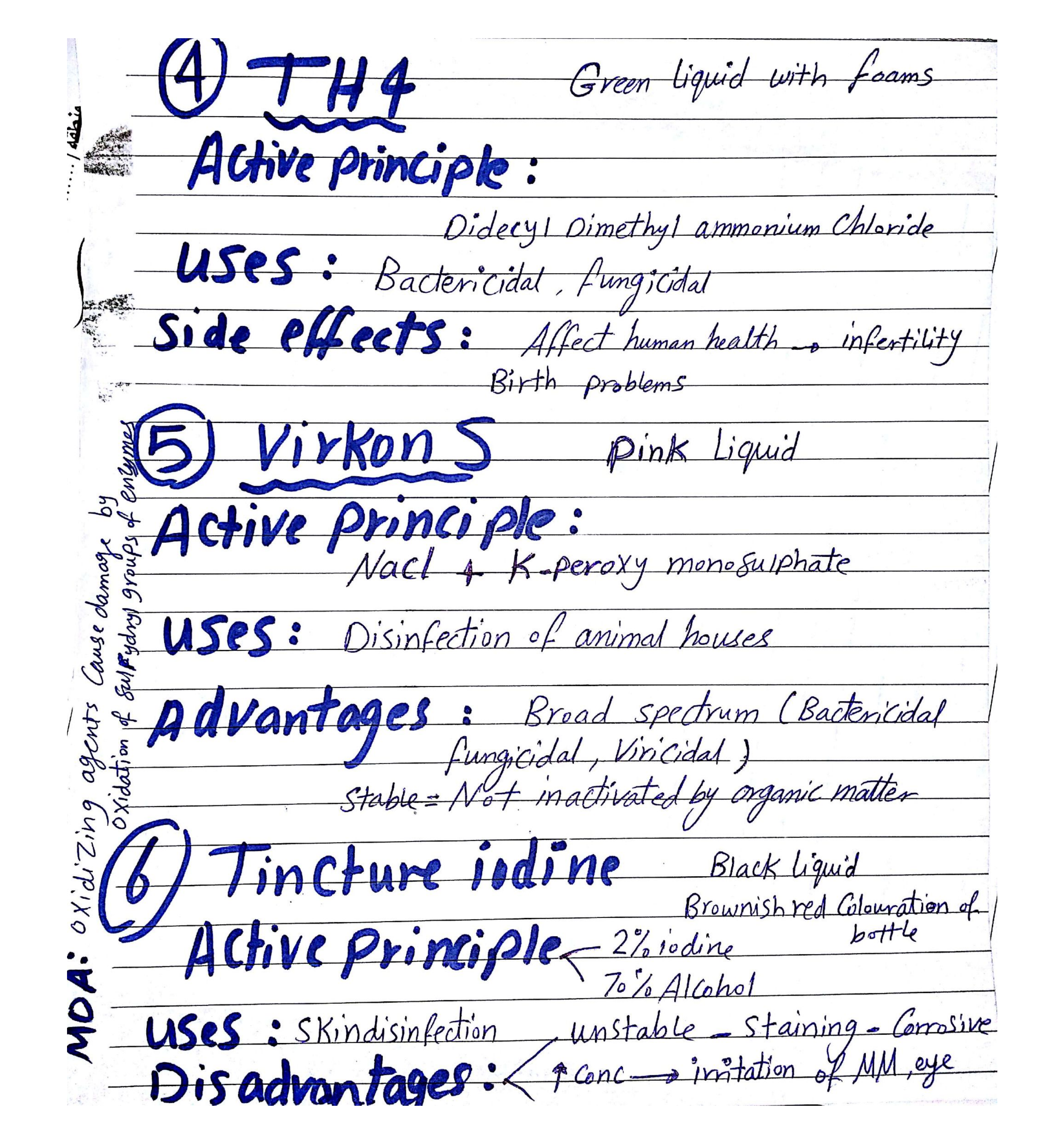
Blue powder

uses: disinfection of water reservoirs
fungiCidal

(3) $KMnO_4$ powder, liquid

violet powder

uses: fumigation process whed added with formaline



④ TH4

Green liquid with foams

Active principle:

Didecyl Dimethyl ammonium Chloride

Uses: Bactericidal, fungicidal

Side effects: Affect human health → infertility

Birth problems

⑤ Virkon S

Pink Liquid

Active Principle:

NaCl + K-peroxy monosulphate

Uses: Disinfection of animal houses

Advantages: Broad spectrum (Bactericidal fungicidal, Viricidal)

Stable = Not inactivated by organic matter

MOA: oxidizing agents Cause damage by oxidation of sulfhydryl groups of enzymes

⑥ Tincture iodine

Black liquid

Brownish red Colouration of bottle

Active Principle ← 2% iodine, 70% Alcohol

Uses: Skin disinfection

Disadvantages: unstable - Staining - Corrosive

↑ conc → irritation of MM, eye

(7) Phenol, cresol

Black Liquid
white "

MOA: precipitation of proteins, inactivation of enzymes

uses:

↳ 20% Chlorhexidine gluconate : preoperative hand and skin disinfection
Chloroxylenols : less irritant can be used ~~against~~ for topical purposes
More effective on G+ve than G-ve bacteria

Disadvantages:

Chlorhexidine inactivated by anionic soaps
Chloroxylenol inactivated by hard water

(8) formaline

Characteristic odour

MOA: Protein denaturation, disrupting of nucleic acids

uses: 40% formaldhyde : Surface disinfection, fumigation
c biological Safety cabinets
2% formaldhyde at 40°C for 20 min :— Wool disinfection
0.25% " " 60°C " 6 hrs : hair, bristle disinfection
1-5% formaline Solution fot bath for foot rot in sheep, Cattle

Advantages: broad spectrum against bacteria fungi, viruses, Mycobacteria, spores

DisAdvantages: Neutralized by ammonia, Unstable
toxic to humans, Poor Penetration

9 Acetic Acid

MoA: Destroy bonds of nucleic acid and precipitation of proteins
Change PH of environment → kill the MO

Methods of application: Spraying, misting, immersing

Uses: 4-5% → household Vinegar
2% → reduce levels of FMD viruses on Contaminate surfaces
reduce bacterial levels in meat packaging plants
reduce levels of Salmonella in feed.

Disadvantages: unstable (inactivated by O.M)

10 Ethyl alcohol

MoA: Dehydration of Cell, denaturation of protein

Uses: 70% → Antiseptic
80% ethanol + 5% isopropylalcohol → inactivate Lipid enveloped Viruses HIV, Hepatitis B, C

(11) Ammonia

Ammonical odour

uses : fumigation process (Neutralisation)